TA-F303ESD/F630ESD

SERVICE MANUAL



Canadian Model
AEP Model
UK Model
TA-F630ESD

E Model

photo: TA-F630ESD

SPECIFICATIONS

Amplifier section

	Cor	ndition	Data
4 ohms, 20 H 0.008%	ız-20 kHz THD	Canadian, UK, E model	120 W + 120 W (THD 0.01%) (DIN: 160 W + 160 W)
6 ohms, 20 H 0.006%	Iz-20 kHz THD	Canadian, UK, E model	100 W + 100 W (DIN: 120 W + 120 W)
		AEP, West Germany model	95 W + 95 W (DIN: 115 W + 115 W)
8 ohms, 20 H 0.004%	z-20 kHz THD	Canadian, UK, E model	90 W + 90 W (DIN: 110 W + 110 W)
		AEP, West Germany model	80 W + 80 W (DIN: 100 W + 100 W)
8 ohms, THD 0,02%			10 Hz - 100 kHz at 45 W
4 ohms			2 dB
8 ohms			1.2 dB
8 ohms, at 10) watt output		0.003%
4 ohm, at rate	ed output		0.008%
6 ohms at rat	ed output		0.006%
8 ohms at rat	ed output		0.004%
8 ohms, 1 kH	z		50
network A			less than 90µV
PHONO MM			RIAA equalization curve ±0.2 dB
TUNER, CD,	TAPE 1, 2, 3, DI	RECT IN	2 Hz - 200 kHz +0 dB
PHONO	мс		0.17 mV, 100 ohms.
	ММ		2.5 mV, 50 kohms
		E 1, 2, 3	150 mV, 50 kohms
PHONO	MC		68 dB 76 dB+ (A)
	ММ		80 dB 87 dB* (A)
TUNER, CD.	DIRECT IN, TAP	E 1, 2, 3	84 dB 105 dB* (A)
	0.008% 6 ohms, 20 H 0.006% 8 ohms, 20 H 0.004% 8 ohms, THD 0.02% 4 ohms 8 ohms at 10 4 ohm, at rate 6 ohms at rat 8 ohms at rat 8 ohms, 1 kH network A PHONO MM TUNER, CD, PHONO TUNER, CD, ADAPTOR IN	4 ohms, 20 Hz-20 kHz THD 0.008% 6 ohms, 20 Hz-20 kHz THD 0.006% 8 ohms, 20 Hz-20 kHz THD 0.004% 8 ohms, THD 0.02% 4 ohms 8 ohms at 10 watt output 4 ohm, at rated output 6 ohms at rated output 8 ohms at rated output 8 ohms, 1 kHz network A PHONO MM TUNER, CD, TAPE 1, 2, 3, DII PHONO MC MM TUNER, CD, DIRECT IN, TAP ADAPTOR IN PHONO MC MM	0.008% 6 ohms, 20 Hz-20 kHz THD 0.006% AEP, West Germany model 8 ohms, 20 Hz-20 kHz THD 0.004% AEP, West Germany model AEP, west Germany mode

-Continued on page 2-





Data
hm
at 8 ohms) and high impedance headphones.
q. 400 Hz)
z)

DA converter section

Item	Condition	Data
Input sensitivity	DIGITAL COAXIAL IN	0.5 Vp-p, ±20%, 75 ohms
	DIGITAL OPTICAL IN 1, 2	TOSLINK
Output voltage impedance	DIGITAL OPTICAL 2 REC OUT	TOSLINK
Output voltage	DA converter	2 V

General

System Preamplifier section: Low-noise high gain NFB type equalizer amplifier, passive type direct tone control Power amplifier section: Pure-complementary SEPP power amplifier

Power requirements

AEP, West Germany model: 220 V AC, 50 Hz

U K model: 240 V AC, 50 Hz E model: 120 V, 220 V or 240 V AC

adjustable, 50/60 Hz

Canadian model: 120 V, AC, 50/60Hz

Power consumption

Canadian model	510 VA	
AEP, UK, West Germany model	220 W	•
UK model	600 W	
E model	340 W	

AC outlet

Canadian model	2 switched, 1 unswitched, 100 watts max, each
AEP, UK, West Germany model	_
E model	1 switched, 1 unswitched, 100 watts each

Dimensions

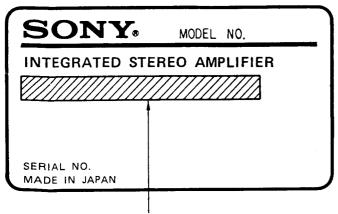
Approx. 430 x 150 x.390 mm (w/h/d) (17 x 5²/₈ x 15³/₈ inches)

Weight⁻

Approx. 13.7 kg (30 lbs 4 oz) net

MODEL IDENTIFICATION

- Specification Label -



AEP, West Germany Model: AC: 220 V ~ 50/60 Hz

UK Model: AC: 240 V ~ 50/60 Hz

E Model: AC: 120/220/240 V

 \sim 50/60 Hz

Canadian Model: AC: 120V 60Hz

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SAFETY CHECK-OUT

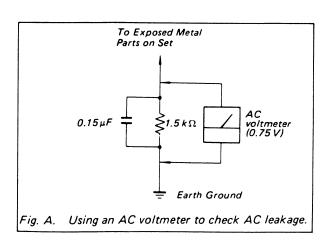
After correcting the original service problem, perform the following safety check before releasing the set to the customer:

Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

- 1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
- 2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
- 3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)



On operating voltage

Before operating the unit, check that the operating voltage of your unit is identical with the voltage of your local power supply.

Where purchased	Operating voltage		
UK Model	240 V AC		
Canadian Model	120V AC		
AEP, West Germany Model	220 V AC		
E Model	120 V, 220 V or 240 V AC adjustable by AC voltage selector		

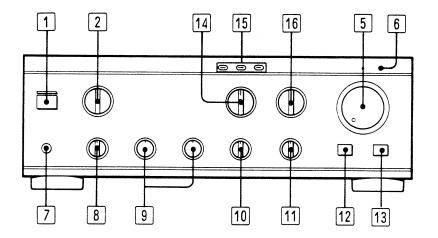
SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK A OR DOTTED LINE WITH MARK A ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE A SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL



1 POWER switch and power/standby indicator

Immediately after turning ON the power, the standby indicator lights in red as the built-in muting circuit activates.

When the amplifier stays in a stable operating condition, the indicator lights in green.

The indicator lights in red when the unit detects shorting of circuit of the speaker outputs or in case of short-circuit of the inputs of DC components.

In such a case, disconnect the power source and check the connected components and speaker systems.

2 SPEAKERS selector

Select speaker system A or B, or both. To use power amplifier or active speaker system connected to the PRE OUT jacks, set the selector to B/ PRE OUT.

For headphone monitoring only, set the selector to OFF.

5 ATTENUATOR knob

Regulates the sound level.

6 MUTING switch and indicator

Generally, keep the switch released (OFF).

Depress the switch to reduce the sound level by 20 dB.

(Output voltage becomes 1/10.)

7 HEADPHONES jack (stereo phone jack)

8 MODE selector

STEREO: For listening to a stereo program. MONO: For listening to a monaural program.

9 BASS and TREBLE controls

10 REC OUT SELECTOR

Selects the program source sent to the REC OUT jacks (rear panel).

When set to DIGITAL, the selection is made with the DIGITL INPUT SELECTOR.

11 BALANCE control

Controls the sound level of left and right speakers.

12 SOURCE DIRECT switch and indicator

Depress the switch. The red indicator lights and the circuits of the tone control, subsonic filter switch , balance control and mode switch are disengaged without regard to the setting of the switches. When this switch is activated, the indicator of the TONE switch does not light.

13 CARTRIDGE selector

Set the selector according to your cartridge.
MM: For moving-magnet type cartridge
MC: For moving-coil type cartridge.

14 DIGITAL INPUT SELECTOR

Selects the desired digital program source. When set to ANALOG, selection is made with the ANALOG INPUT SELECTOR.

15 SAMPLING FREQ (frequency) indicator

When a digital signal is being input correctly, the sampling frequency of the signal is displayed (44.1 kHz is displayed when CD player is being played). The indicator lights in a second after the DIGITAL INPUT is selected and the program source starts at the same time.

16 ANALOG INPUT SELECTOR

Selects the desired analog program source. The selection is made only when the DIGITAL INPUT SELECTOR is set to ANALOG.

PRECAUTI

1. Adjust 10-15

2. Alway

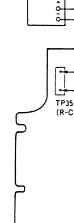
Procedure
Set the A
adjust RT

voltmeter :

IDLING AL

Adjustment

(DC0. 25V rai



SECTION 2 ELECTRICAL ADJUSTMENTS

PRECAUTIONS

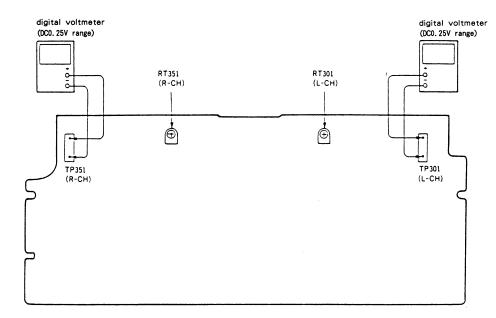
- 1. Adjust the idling after tuning the unit on for about 10-15 minutes, giving it time to warm up.
- 2. Always make sure to adjust the idling when repairing the power amp section or when replacing any parts.

IDLING ADJUSTMENT

Procedure:

Set the ATTENUATOR control as low as possible and adjust RT301 (L-CH) and RT351 (R-CH) so that the voltmeter reads 7mV at TP301 (L-CH) and TP351 (R-CH).

Adjustment Location: power board



ıt speakers.

ghts and the er switch disengaged ches. ator of the TONE

.go.

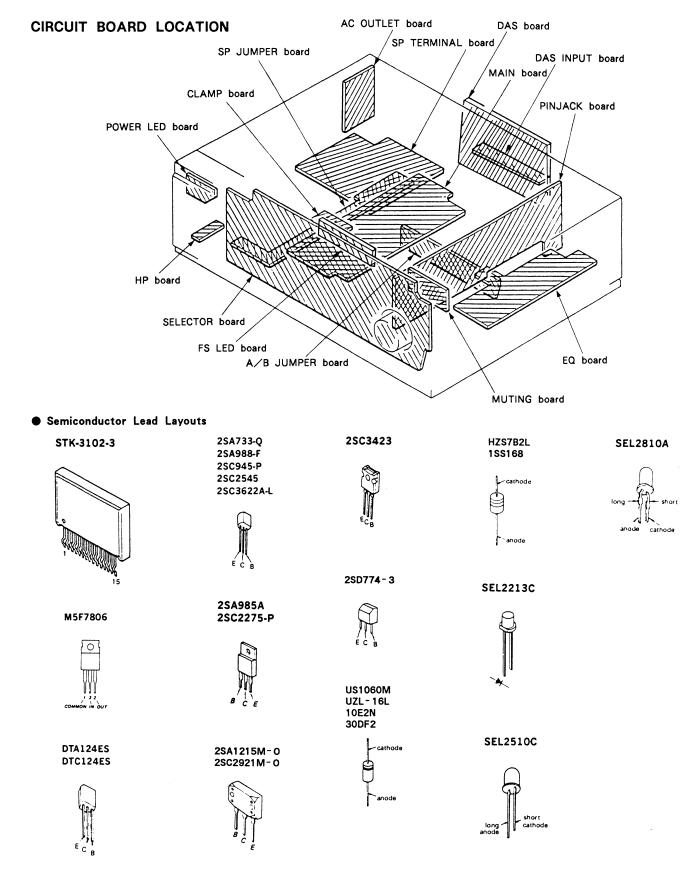
rce. When set to NALOG INPUT

rectly, the played (44.1 kHz is yed).

e DIGITAL INPUT rts at the same

urce. The AL INPUT

SECTION 3 DIAGRAMS



Note on Schematic Diagrams:

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ${}^1\!/_{\!4}\,W$ or less unless otherwise specified.
- Components for right channel have same values as for left channel.
- : nonflammable resistor.
- fusible resistor.

Note:

The components identified by mark or dotted line with mark are critical for safety.
Replace only with part number specified.

Note:

Les composants identifiés par une marque Asont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

D

G

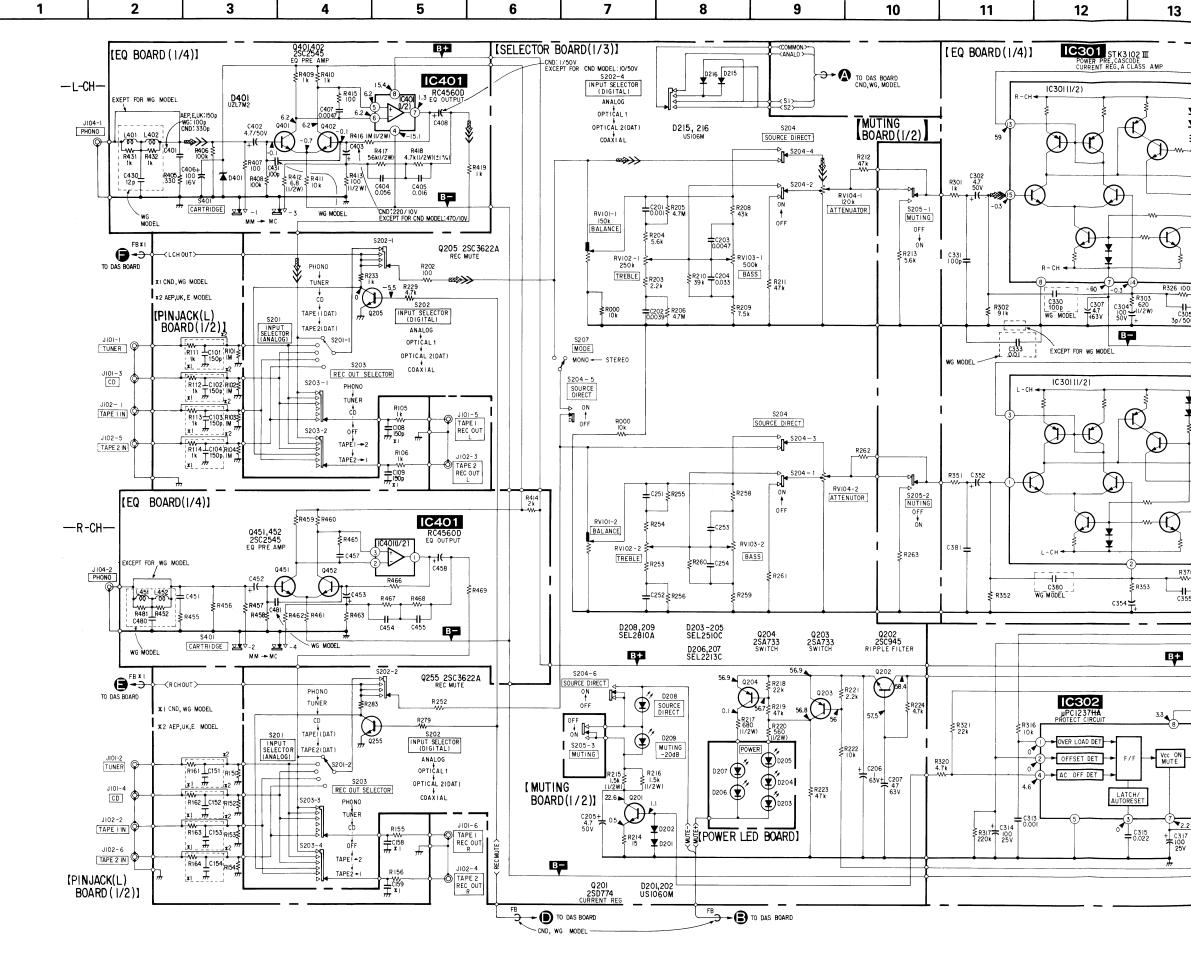
- adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.

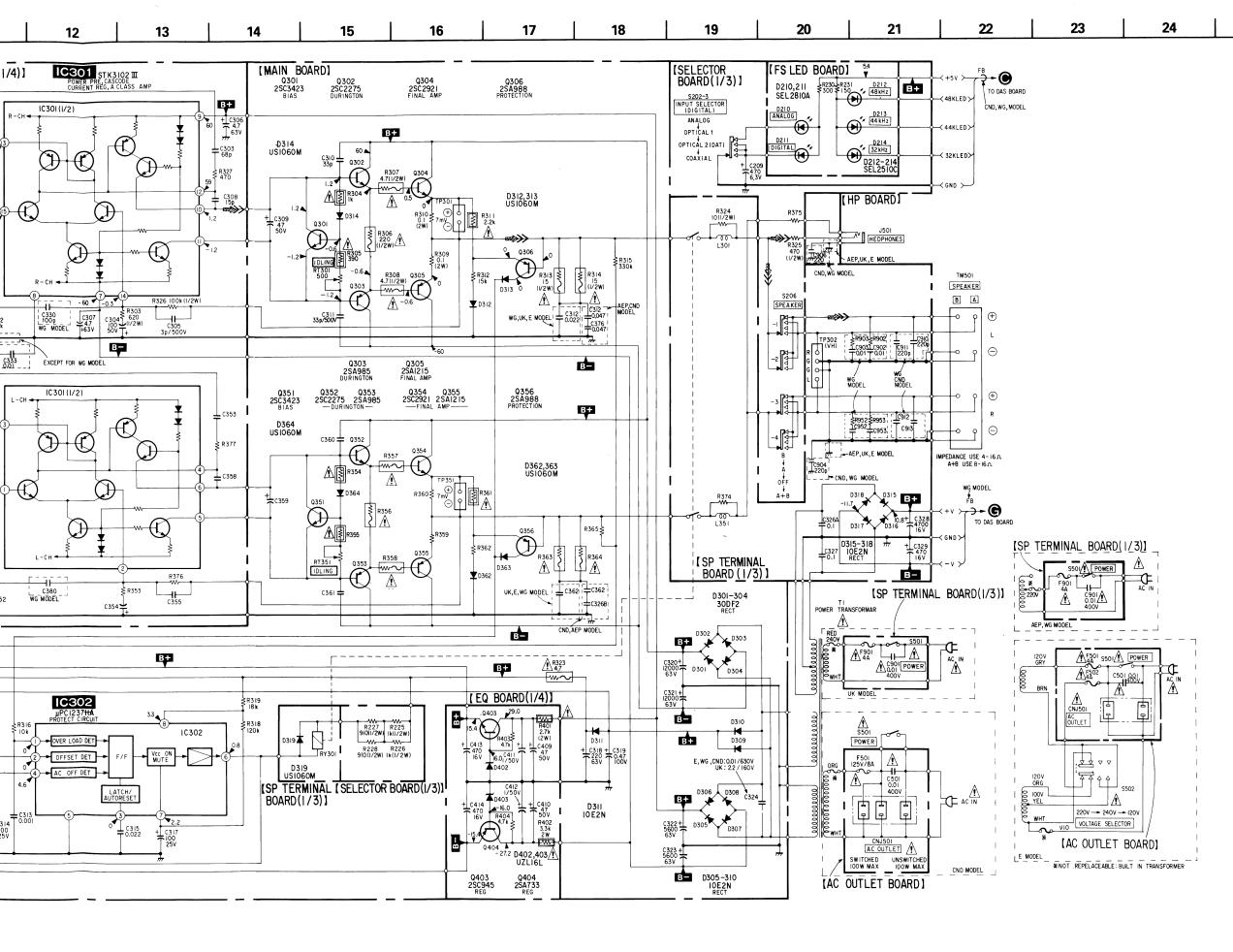
]: PHONO

- Voltages are taken with a VOM. (Input impedance 10M Ω)
- Voltage variations may be noted due to normal production torerances.
- Signal path.

: PHONO

- WG : West Germany
- CND : Canadian

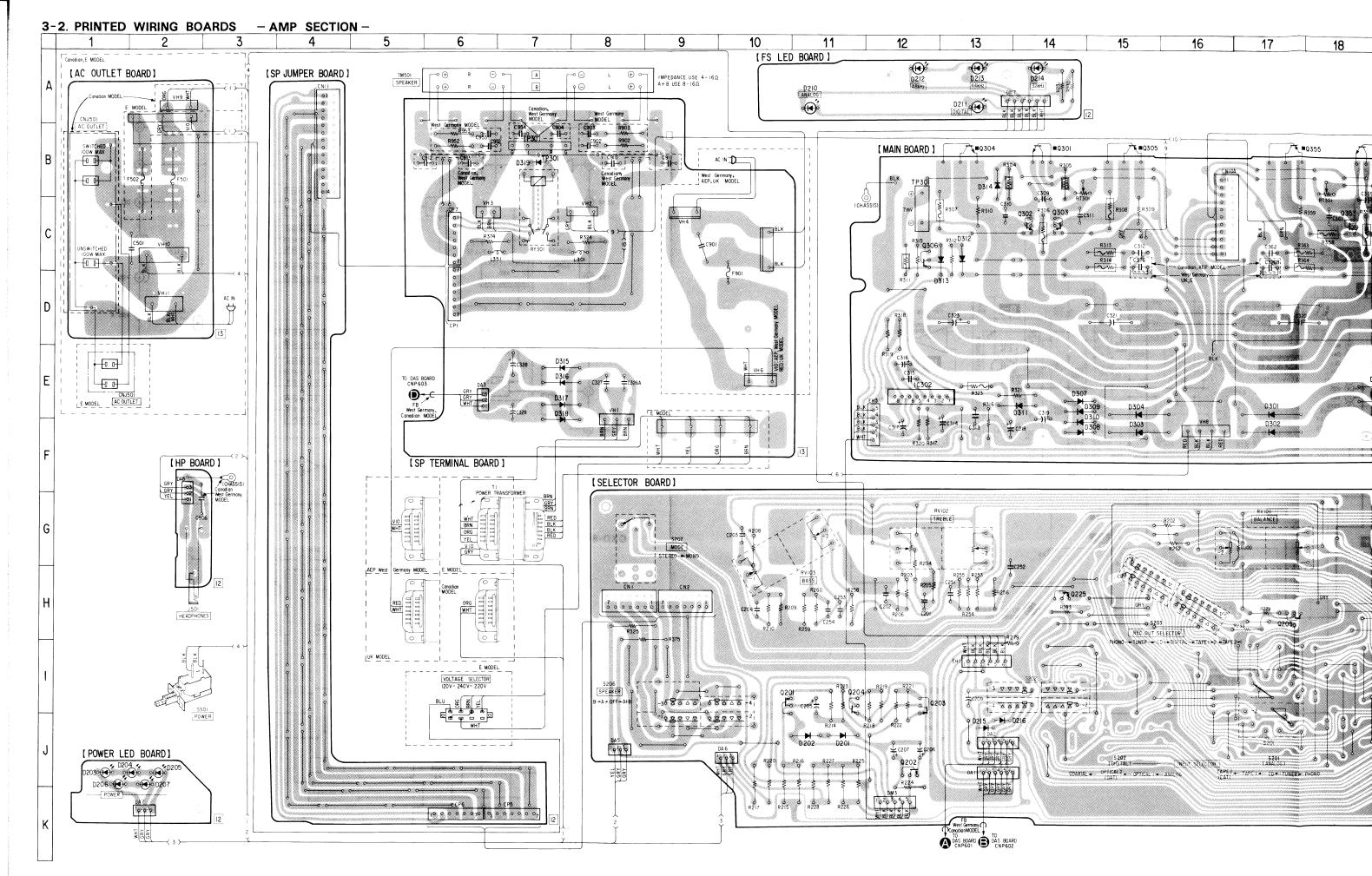


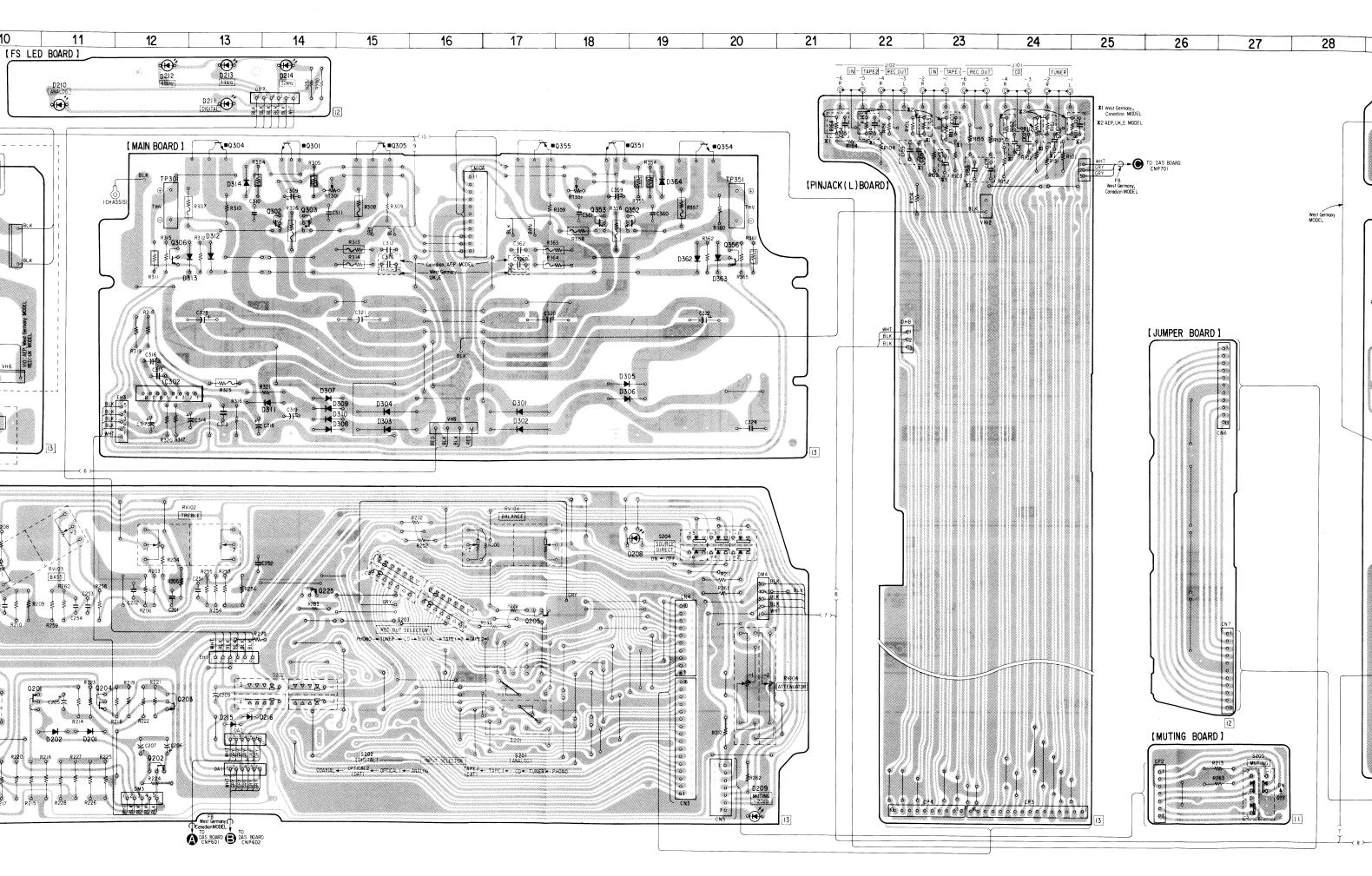


25

26

27





22	23	24	25	26	27	28	29	30	31	32
TAPEZ - INC. OUT - INC	THE STATE OF THE S	THE REPORT OF THE PARTY OF THE	West Germany, Conoxiden MODEL	TO DAS BOARD CNP701 IMUTING BOARD	CN7 O1 O2 O3 O3 O3 O4 O4 O4 O5 O5 O5 O6 O6 O6 O6 O6 O7	West Germany MODEL	R456 C454 R453 R456 C454 R468 R457 C453 R458 R462 R462 R468 R462 R462 R468 R463 R468 R462 R468 R462 R468 R462 R468 R462 R468 R468 R462 R468 R462 R468 R462 R468 R462 R468 R462 R462 R462 R462 R462 R462 R462 R462		OARD] R417 R418 C407 R419 C407 C408 C108 C108	

Semiconductor Location

33

34

35

Ref. No.	Location	Ref. No.	Location
D201 D202 D203 D204 D205	J-11 J-11 J-1 J-2 J-2	D363 D364 D401 D402 D403	C-20 B-19 F-30 F-30 F,-29
D206 D207 D208 D209 D210	J-1 J-2 G-19 K-20 A-11	IC301 IC302 IC401	I-30 E-12 E-30
D211 D212 D213 D214 D215 D216 D301 D302 D303 D304 D305 D306 D307 D308 D309 D310 D311 D311 D312 D313 D314 D315 D316 D317 D318 D319 D362	A-13 A-12 A-13 A-14 J-13 E-17 F-17 F-15 E-18 E-18 E-14 F-14 E-14 C-13 C-13 B-7 E-7 E-7 E-7 C-19	Q201 Q202 Q203 Q204 Q205 Q255 Q301 Q302 Q303 Q304 Q305 Q351 Q352 Q353 Q354 Q355 Q356 Q401 Q402 Q403 Q404 Q451 Q452	I-10 J-12 I-12 I-11 H-17 H-14 B-14 C-14 B-13 B-15 C-12 B-18 C-18 B-19 B-17 C-20 D-30 D-30 F-31 F-29 D-29 D-29

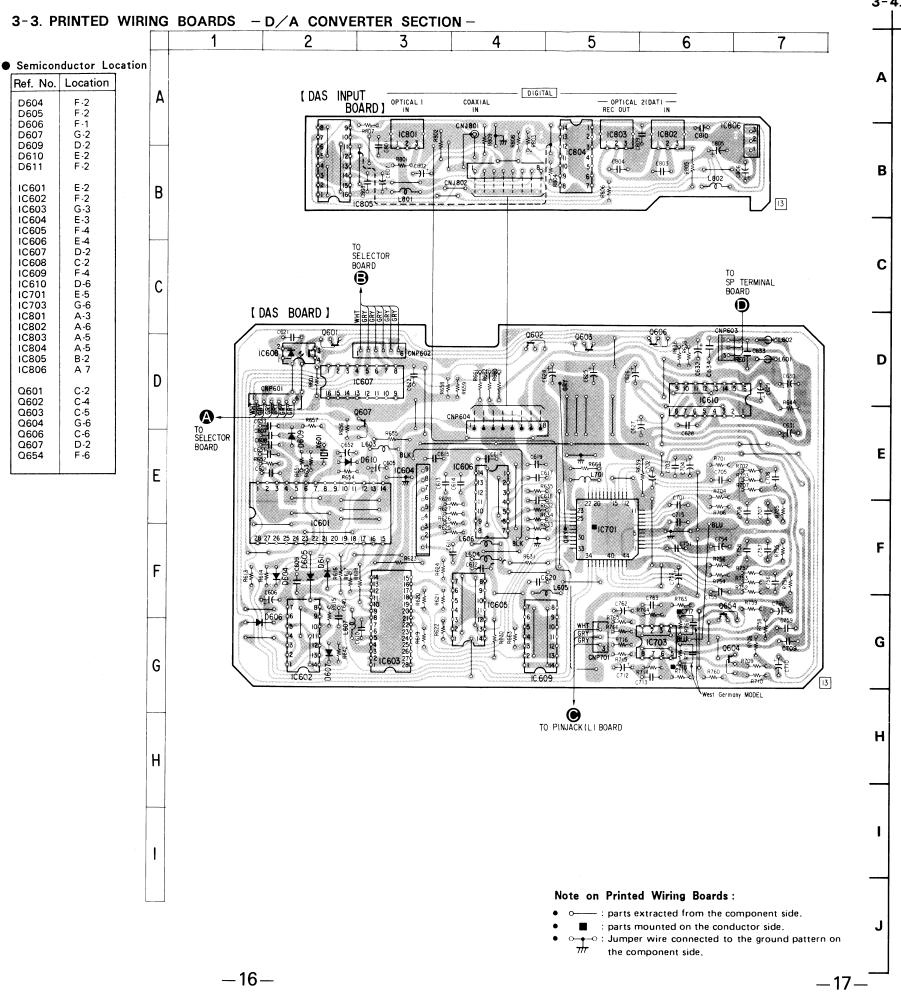
Note on Printed Wiring Boards:

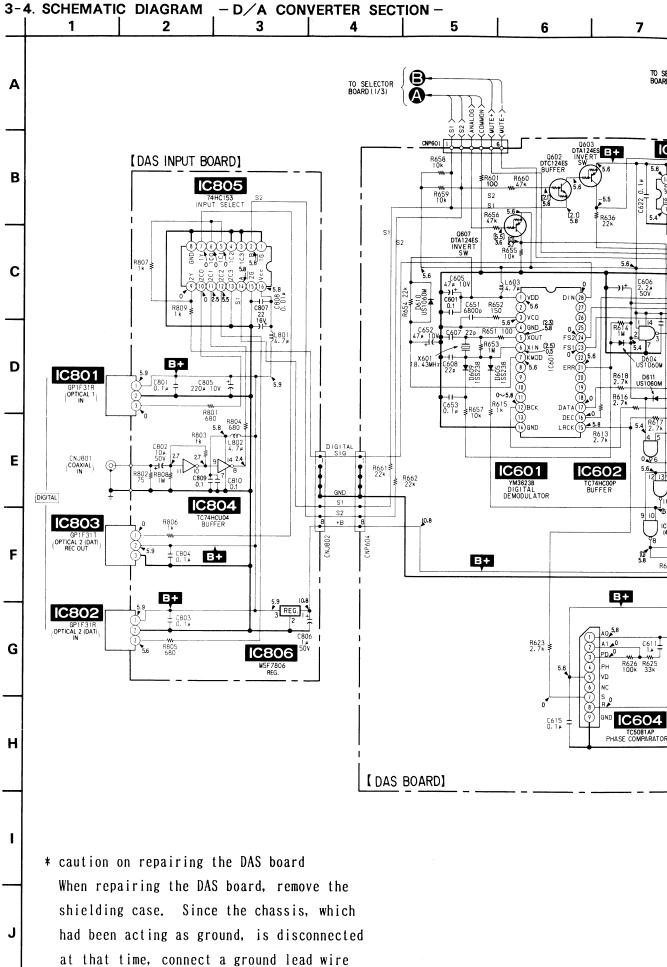
• o---: parts extracted from the component side.

• • parts extracted from the conductor side.

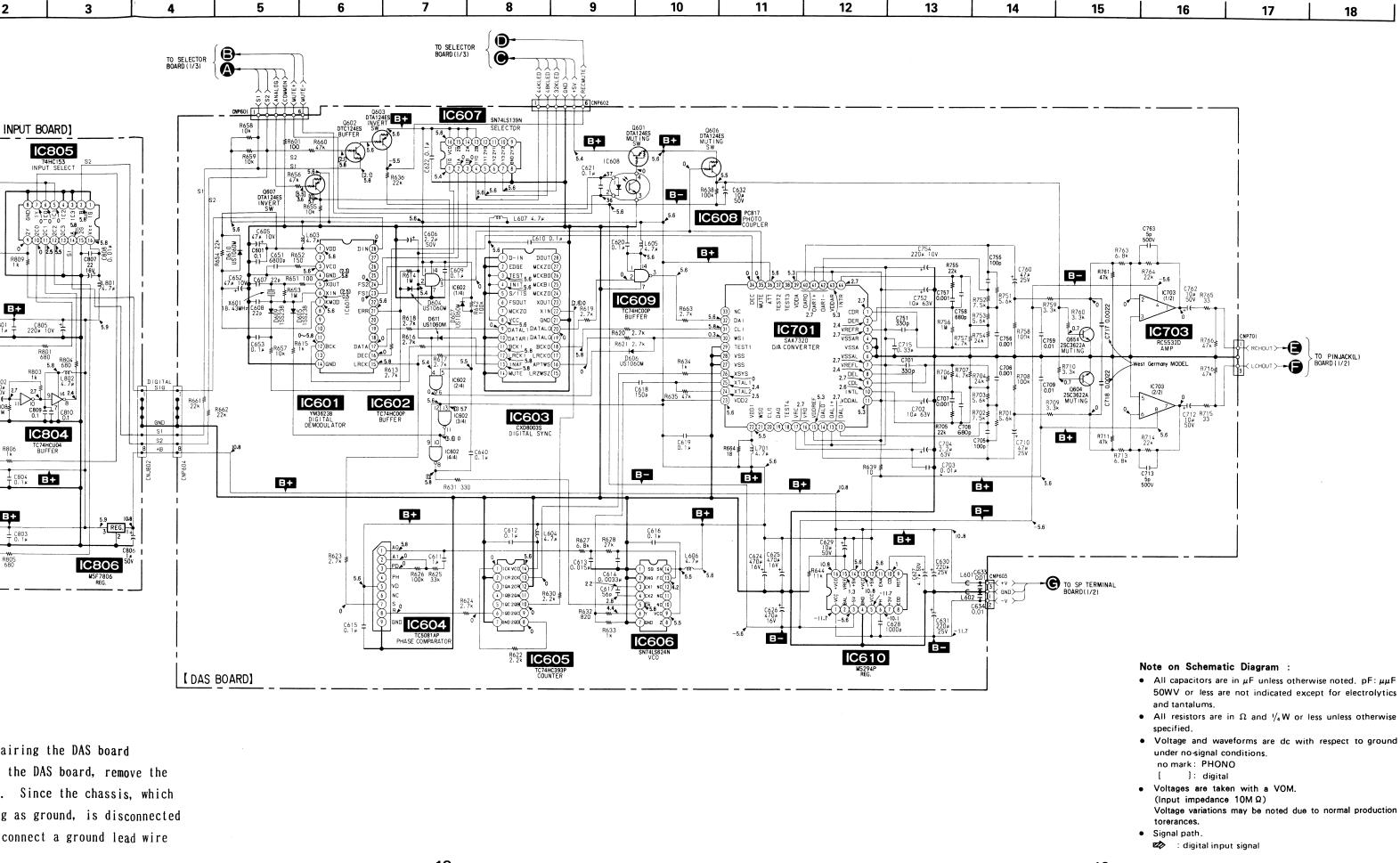
• : parts mounted on the conductor side.

—14—



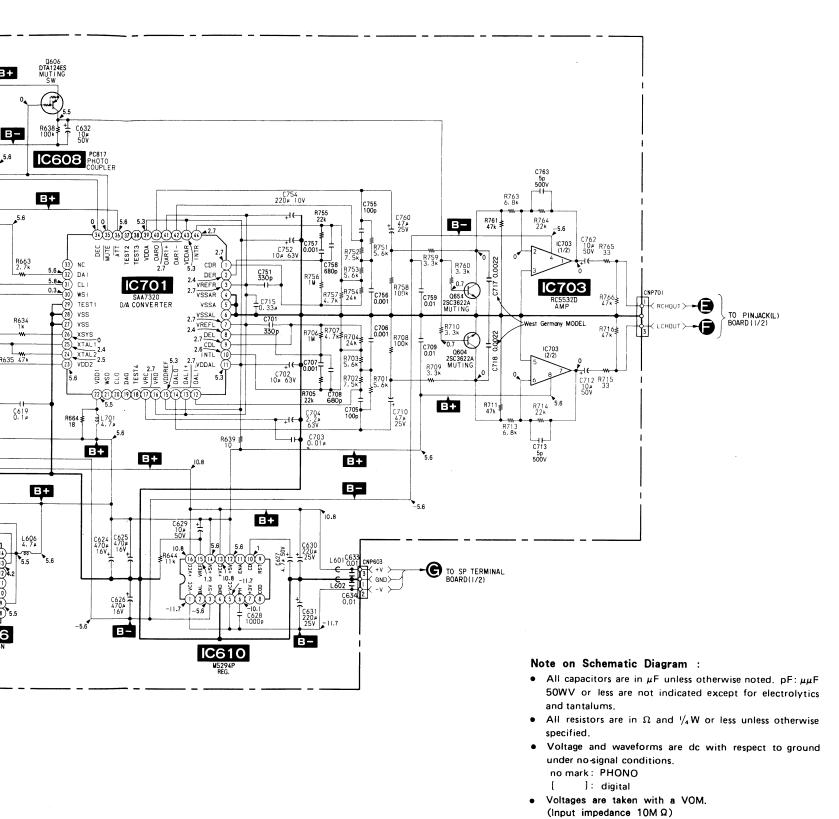


during repair.

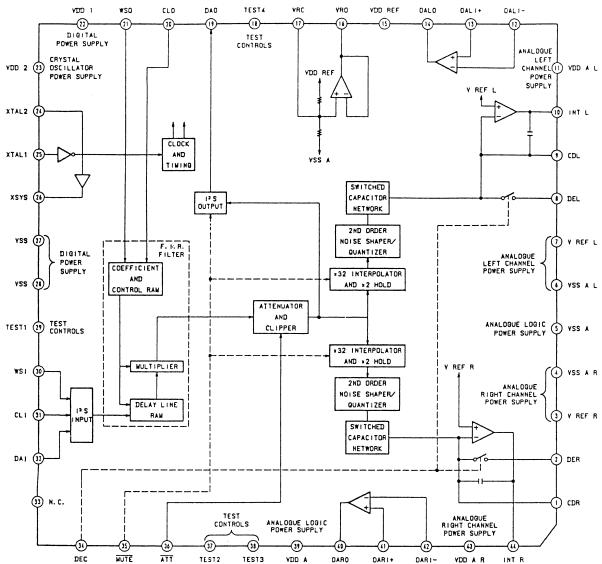


GRAM - D/A CONVERTER SECTION -

10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18



SAA7320



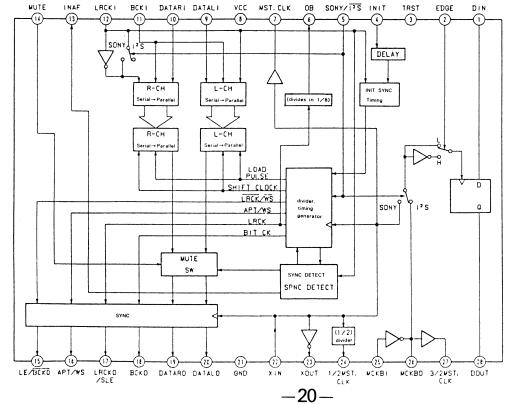
CXD-8003S

Voltage variations may be noted due to normal production

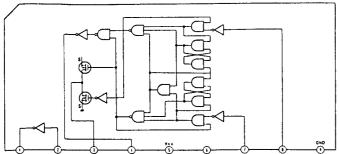
Signal path.

-19-

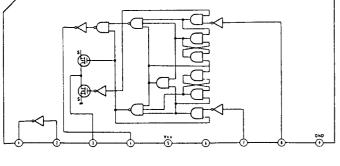
: digital input signal



TC5081AP



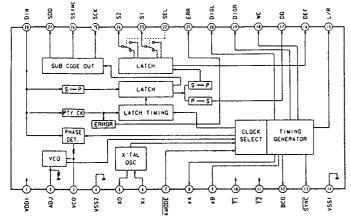
YM3623B

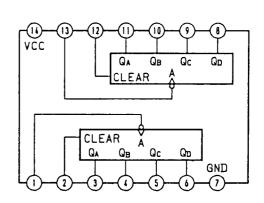


VCC GND

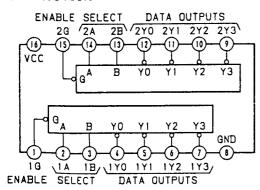
TC74HC393P

TC74HC00P



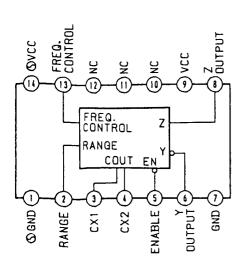


SN74HC139N

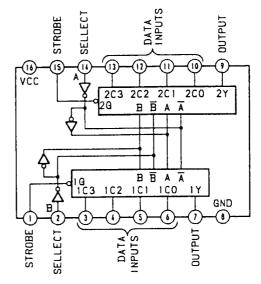


IN	PUTS	OUTPUTS				
G	A B	Y0Y1Y2Y3				
Н	XX	нннн				
L	LL	гннн				
L	LH	ньнн				
L	H L	ннгн				
L	нн	HHHL				

SN74LS624N



TC74HC153P



IN	PUTS	O UTPUT
G	AB	Y
Н	XX	L
L	LL	CO
L	LH	C1
L	HL	C2
L	н н	_C3
1		

SECTION 4 EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example: (RED) ... KNOB, BALANCE (WHITE)

Cabinet's Color

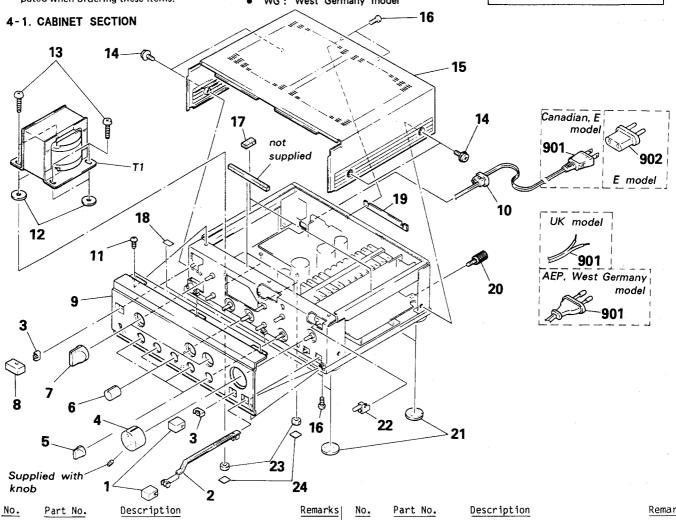
Parts' Color

WG: West Germany model

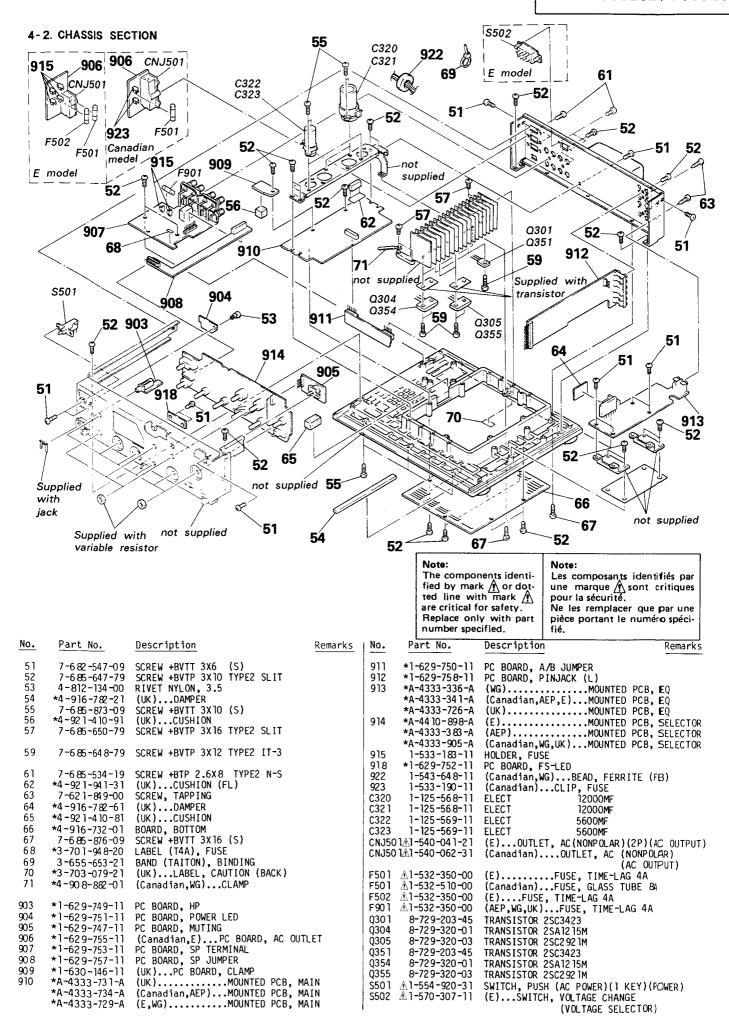
The components identified by mark A or dotted line with mark
A are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque sont critiques pour la sécurité.

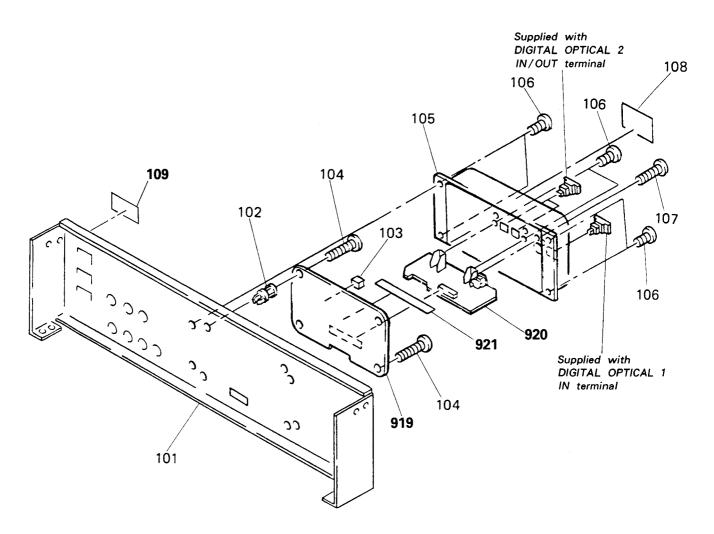
Ne les remplacer que par une pièce portant le numéro spécifé.



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-908-875-01	KNOB, SQUARE		16	7-685-873-09	SCREW +BVTT 3X10 (S)	
2	4-929-227-01	JOINT		17	*2-527-517-00	(UK)CUSHION, CASE RETAINER	
2 3	4-864-307-00	RING		18	*3-846-067-21	(UK)SPACER (C)	
4	4-929-224-01	KNOB (NA-48)		19	*4-929-232-01	SPACER	
•	7 JEJ EET 01	KNOD (IIII 10)		20	3-706-165-00	SCREW	
5	4-916-745-01	KNOB (DIA.21)					
Ğ	4-916-746-11			21	*4-923-850-01	FOOT (DIA. 46)	
7	4-916-729-01			22	4-923-879-01	BUTTON (DIA.4)	
8	4-908-866-01	KNOB, SQUARE		23	7-684-024-04	N 4. TYPE 2	
•	1 300 000 01	KNOD, SQUIVE		24	*4-929-266-01		
9	A-4317-986-A	(Canadian)PANEL ASSY, FRONT			. 323 200 01	000112011	
	A-4317-987-A			901	№ 1-574-381-11	(E)CORD, POWER	
		(E)PANEL ASSY, FRONT			A 1-551-478-00		
		(2)			A 1-574-805-11	(AEP,WG)CORD, POWER	
10	*3-703-244-00	(Canadian,AEP,WG,UK)			A 1-574-804-11	(UK)CORD, POWER	
	• 100 = 11	BUSHING (2104)	CORD		***		
	3-703-571-11	(E)BUSHING (S) (4516)		902	1-526-565-00 1-526-565	(E)AC PLUG ADAPTOR	
11	7-682-547-09	SCREW +BVTT 3X6 (S)		T1	1-449-691-11 1 1 1 1 1 1 1	(Canadian)TRANSFORMER, POWER	
12	4-885-984-21	(UK)WASHER		T1	№ 1-449-693-11	(AEP)TRANSFORMER, POWER	
13	7-682-566-09	SCREW +B 4X20		T 1	1-449-694-11 1 1 1 1 1 1 1 1 1	(WG)TRANSFORMER, POWER	
14	4-847-802-00	SCREW		T1	<u> 1-449-695-11</u>	(E)TRANSFORMER, POWER	
15	4-916-737-01	CASE		T1	<u> </u>	(UK)TRANSFORMER, POWER	
			2	2			
			2	_			



4-3. D/A CONVERTER SECTION



No.	Part No.	Description	Remarks	No.	Part No.	Description Remarks	,
101	*4-929-239-03 *4-929-239-21 *4-929-281-01	(Canadian)PANEL, BACK (AEP,WG,UK)PANEL, BACK (E)PANEL, BACK		108	*4-929-275-01 *4-929-277-01 *4-929-278-01 *4-929-279-01	(Canadian)LABEL, MODEL NUMBER (WG)LABEL, MODEL NUMBER (UK)LABEL, MODEL NUMBER (E)LABEL, MODEL NUMBER	
102 103	*4-884-992-00 *4-929-244-01	SUPPORT, PC (UK)CUSHION			*4-929-907-01	(AEP)LABEL, MODEL NUMBER	
104 105 106 107				919	*A-4333-387-A *A-4333-755-A *A-4410-909-A	(WG)MOUNTED PCB, DAS (Canadian,E,AEP)MOUNTED PCB, DAS (UK)MOUNTED PCB, DAS	
107	7-02 1-849-00	JUNEW, INFEITHU		920 92 1	*1-629-760-11 *1-560-242-21	PC BOARD, DAS INPUT BUS BAR 4P	

SECTION 4 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS: MF: μF, PF: μμF.

RESISTORS

- All resistors are in ohms. F: nonflammable

COILS • MMH: mH, UH: μH

SEMICONDUCTORS

In each case, U: μ, for example: UA...: μΑ..., UPA...: μΡΑ..., UPC...: μPD...

• WG: West Germany model

The components identified by mark \(\underbrack \) or dotted line with mark \(\underbrack \) are critical for safety.

Replace only with part number specified.

Les composants identifiés par une marque A sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description	Ref.No.	Part No.	Description			
901			C 152	1-162-284-31	(Canadian.WG)	,		
90 1	<u>1-551-478-00</u> <u>1-574-381-11</u>	(Canadian)CORD, POWER (E)CORD, POWER			CEF	RAMIC 150	PF 10%	50 V
	1-574-804-11 1-574-805-11	(UK)CORD, POWER (AEP,WG)CORD, POWER	C 153	1-162-284-31	(Canadian,WG)		PF 10%	50 V
902	∆1-526-565-00	(E)AC PLUG ADAPTOR	C 154	1-162-284-31	(Canadian,WG))	DE 10.4	50 V
903	*1-629-749-11	PC BOARD, HP						J0 V
904	*1-629-751-11	PC BOARD, POWER LED	C 158	1-162-284-31	(Canadian,WG)		PF 10%	50 V
905 906	*1-629-747-11 *1-629-755-11	PC BOARD, MUTING (Canadian,E)PC BOARD, AC OUTLET	C 159	1-162-284-31	(Canadian,WG)		PF 10%	50 V
907	*1-629-753-11	PC BOARD, SP TERMINAL	620.1	1-120-471-00				50 V
908	*1-629-757-11	PC BOARD, SP JUMPER	C201 C202	1-130-471-00 1-130-478-00	MYLAR MYLAR	0.001MF 0.0039MF	5 % 5 %	50 V
909	*1-630-146-11	(UK)PC BOARD, CLAMP	C203	1-130-479-00	MYLAR	0.0047MF	5 %	50 V
910	*A-4333-729-A	(E,WG)MOUNTED PCB, MAIN (UK)MOUNTED PCB, MAIN	C204	1-136-159-00 1-123-369-00	FILM ELECT	0.033MF 4.7MF	5 % 20 %	50 V 50 V
	*A-4333-731-A *A-4333-734-A	(Canadian, AEP)MOUNTED PCB, MAIN	C205 C206	1-123-389-00	ELECT	1MF	20%	63 V
911.	*1-629-750-11	PC BOARD, A/B JUMPER	C207	1-124-918-11	ELECT	4 7MF	20%	63 V
912	*1 - 629-758-11	PC BOARD, PINJACK (L)	C209 C251	1-124-472-11 1-130-471-00	ELECT MYLAR	470MF 0.001MF	20% 5%	6.3V 50V
913	*A-4333-336-A *A-4333-341-A	(WG)MOUNTED PCB, EQ	C252	1-130-478-00	MYLAR	0.0039MF	5%	50 V
	*A-4333-726-A	(Canadian,AEP,E)MOUNTED PCB, EQ (UK)MOUNTED PCB, EQ	C253	1-130-479-00	MYLAR	0.0047MF	5 %	50 V
914	*A-4410-898-A	(E)MOUNTED PCB, SELECTOR	C254 C302	1-136-159-00 1-123-369-00	FILM (WG)ELECT	0.033MF 4.7MF	5 % 20%	50 V 50 V
	*A-4333-383-A *A-4333-905-A	(AEP)MOUNTED PCB, SELECTOR (Canadian, WG, UK)MOUNTED PCB, SELECTOR	C303	1-101-888-00	(Canadian, AEF	P.E.WG)		
915	1-533-183-11	HOLDER, FUSE	C303	1-104-276-11	CERAM	IC 68PF	5 % 10%	50 V 50 V
918	*1-629-752-11	PC BOARD, FS-LED					10%	301
919	*A-4333-387-A	(WG)MOUNTED PCB, DAS	C304	1-123-360-00	(Canadian,AE)	100MF	20%	50 V
	*A-4333-755-A *A-4410-909-A	(Canadian,E,AEP)MOUNTED PCB, DAS	C304	1-126-052-11	(UK)ELECT	100MF	20%	50 V
920	*1-629-760-11	PC BOARD, DAS INPUT	C305	1-102-936-00	(Canadian,AEF		0.5PF	50V
92 1	*1-560-242-21	BUS BAR 4P	C305	1-107-276-11	(UK)MICA	3PF	0.5PF	500 V
922 923	1-543-64 8-11 1-533-190-11	(Canadian,WG)BEAD, FERRITE (FB) (Canadian)CLIP, FUSE	C306	1-123-369-00	ELECT	4.7MF	20%	63V
C 10 1	1-162-284-31	(Canadian, WG)	C307	1-123-369-00	ELECT	4.7MF	20%	63 V
C 102	1-162-284-31	CERAMIC 150PF 10% 50V (Canadian, WG)	C308	1-102-951-00	(Canadian,AE)		5 %	50 V
•	, 102 20. 01	CERAMIC 150PF 10% 50V	C308	1-104-263-11	(UK)STYROL		10%	50 V
C 103	1-162-284-31	(Canadian, WG)	C309	1-123-359-00	(Canadian, AE		00#	5011
C 104	1-162-284-31	CERAMIC 150PF 10% 50V (Canadian, WG)	C309	1-124-910-11	ELECT	47MF 47MF	20% 20%	50 V 50 V
		CERAMIC 150PF 10% 50V	C3 10	1-102-963-00	(Canadian,AE			
c 108	1-162-284-31	(Canadian, WG)CERAMIC 150PF 10% 50V	C3 10	1-107-159-00	CERAM		5 % 5 %	50 V 500 V
C 109	1-162-284-31	(Canadian, WG) CERAMIC 150PF 10% 50V	C311	1-102-963-00	(Canadian, AE		- /-	
C 15 1	1-162-284-31	(Canadian, WG)			CERAM	IC 33PF	5 %	50 V
		CERAMIC 150PF 10% 50V	C311	1-107-159-00	(UK)MICA	33PF	5 %	500 V

Ref.No.	Part No.	Description				Ref.No.	Part No.	Description			
C3 12	1-130-487-00	MYLAR	0.022MF	5 %	50 V	C403	1-126-103-11	ELECT	470MF	20%	10 V
C3 13 C3 14	1-130-471-00 1-123-333-00	MYLAR ELECT	0.001MF 100MF	5% 20%	50V 25V	C404 C404	1-130-341-00 1-136-162-00	(UK)FILM (Canadian,AE	0.056MF P.E.WG)	3%	1001
C3 15 C3 17 C3 18	1-130-487-00 1-123-333-00 1-123-604-00	MYLAR ELECT ELECT	0.022MF 100MF 220MF	5 % 20 % 20 %	50V 25V 63V	C405	1-130-971-00	FILM	0.056MF 0.016MF	5% 3%	50 V 100 V
C319	1-123-379-00	ELECT	0.47MF	20%	1000	C405	1-136-032-51	(Canadian, AE			507
C320 C321	1-125-568-11 1-125-568-11	ELECT ELECT	12000MF 12000MF			C406 C407	1-123-333-00 1-130-479-00	ELECT MYLAR	100MF 0.0047MF	20 % 5 %	16 V 50 V
C322 C323	1-125-569-11 1-125-569-11	ELECT ELECT	5600MF 5600MF			C408	1-123-356-00	(Canadian, AE		20%	50 V
C324	1-136-601-11	(Canadian, AE		30 W	coou	C408	1-126-059-11	ELECT		20%	50 V
C324	1-136-880-11	FILM (UK)FILM	0.01MF 2.2MF	10 % 10 %	630V 160V	C409	1-123-359-00	(Canadian,AE		20%	50 V
C326	1-136-165-00	FILM	0.1MF	5 %	507	C409	1-124-910-11	(UK)ELECT		20%	50 V
C327 C328	1-136-165-00 1-124-523-11	FILM ELECT	0.1MF 4700MF	5 % 20 %	50 V 16 V	C4 10	1-123-359-00	(Canadian,AE		20%	50 V
C329 C330	1-126-103-11 1-162 - 282-31	ELECT (WG)CERAM	470MF NIC 100PF	20 % 5 %	16V 50V	C4 10	1-124-910-11	(UK)ELECT	47PF	20%	50 V
C331	1-102-973-00	(Canadian,AE				C4 11 C4 12	1-123-380-00 1-123-380-00	ELECT ELECT	1MF 1MF	20 % 20 %	50 V 50 V
C331	1-136-808-11	CERAM (UK)FILM	100PF 100PF	5% 5%	50V 100V	C4 13 C4 14	1-126-103-11 1-126-103-11	ELECT ELECT	470MF 470MF	20% 20%	16V 16V
C333 C352	1-161-379-00 1-123-369-00	(WG)CERAM (WG)ELECT		30 % 20 %	25 V 50 V	C430 C431	1-102-816-00 1-102-816-00	(WG)CERAM		5% 5%	50 V 50 V
C353	1-101-888-00	(Canadian, AE			5011	C451	1-101-361-00	(Canadian, AE			
C353	1-104-276-11	CERAM (UK)STYRC		5% 10%	50 V 50 V	C451 C451	1-102-973-00 1-104-282-91	CERAM (WG)CERAM (UK)STYRO	IC 100PF	5% 5% 5%	50 V 50 V 50 V
C354	1-123-360-00	(Canadian,AE		20%	50 V	C452	1-123-369-00	(Canadian, AE			
C354	1-126-052-11	(UK)ELECT	100MF	20%	50 V	C453	1-124-472-11	ELECT		20% 20%	50 V 10 V
C355	1-102-936-00	(Canadian,AE		0.5PF	50V	C454	1-136-162-00	(Canadian, AE	P.E.WG)		
C355	1-107-276-11	(UK)MICA	3PF	0.5PF	500 V	C454	1-130-341-00	FIĹM (UK)FILM	0.056MF 0.056MF		50 V 100 V
C358	1-102-951-00	(Canadian,AE	11C 15PF	5 %	50 V	C455	1-136-032-51	(Canadian, AE	P,E,WG)		
C358	1-104-263-11	(UK)STYRO	OL 15PF	10%	50 V	C455	1-130-971-00	FILM (UK)FILM	0.016MF 0.016MF		50V 100V
C359	1-123-359-00	(Canadian,AE		20%	50 V	C457	1-130-479-00	MYLAR	0.0047MF	5%	50V
C359	1-124-910-11	(UK)ELECT	r 47MF	20%	50 V	C458	1-123-356-00	(Canadian,AE	P.F.WG)		
C360	1-102-963-00	(Canadian,AE		5 %	50 V	C458	1-126-054-11	ELECT	10 MF	20% 20%	50 V 50 V
C360	1-107-159-00	(UK)MICA	33PF	5%	500 V		1-102-816-00	(WG)CERAM		5%	501
C361	1-102-963-00	(Canadian,AE		E 4/	50 V	C4 80 C4 81	1-162-282-31	(WG)CERAM		5 %	507
C361	1-107-159-00	(UK)MICA	33PF	5% 5%	500V	C501	<u> </u>	(Canadian,E)			40011
C362 C380	1-130-487-00 1-162-282-31	MYLAR (WG)CERA	0.022MF MIC 100PF	5 % 5 %	50 V 50 V	C60 1	1-136-165-00	CERAM	IC 0.01MF 0.1MF	5 %	400V 50V
C3 81	1-102-973-00	(Canadian,A	EP,E,WG)			C606 C607	1-123-381-00 1-162-207-31	ELECT CERAMIC	2.2MF 22PF	20% 5%	50 V 50 V
C381	1-136-808-11	CERAI	MIC 100PF	5 % 5 %	50 V 100 V	C608	1-162-207-31	CERAMIC	22PF	5%	50 V
C401	1-101-361-00	(Canadian, A				C609 C610	1-136-165 <i>-</i> 00 1-136-165 <i>-</i> 00	FILM FILM	0.1MF 0.1MF	5% 5%	50 V 50 V
C401 C401	1-102-973-00 1-104-2 <i>8</i> 2-91	CERAI (WG)CERAI (UK)STYR	MIC 100PF	5 % 5 % 5 %	50 V 50 V 50 V	C611	1-136-746-11	(Canadian,AE		5 %	50 V
C402	1-123-369-00				-	C611	1-136-921-11	(UK)FILM	1MF	5%	50 V
3.02	25 005 00	ELEC		20%	50 V						

Note:
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Note:

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Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			1	Ref.No.	Part No.	Description			
C6 12	1-136-165-00	FILM	0.1MF	5 %	50V	C755	1-102-973-00	(Canadian, AEP		- M	504
C6 13 C6 14	1-136-155-00 1-130-477-00	FILM MYLAR	0.015MF 0.0033MF	5% 5%	50V 50V	C755	1-136-808-11	CERAMI	100PF 100PF	5% 5%	50V 100V
C6 15	1-136-165-00		0.1MF	5 %	507	C756	1-102-074-00	(Canadian, AEP		70 e/	FOV
C616 C617	1-136-165-00 1-162-217-31	FILM CERAMIC	0.1MF 56PF	5% 5%	50 V 50 V	C756	1-136-814-11	CERAMI	0.001MF 0.001MF		50V 100V
C618	1-162-284-31	CERAMIC	150PF	10%	50 V	C757	1-102-074-00	(Canadian, AEP		30 W	EOV
C619 C620	1-136-165-00 1-136-165-00	FILM FILM	0.1MF 0.1MF	5% 5%	50 V 50 V	C757	1-136-814-11	CERAMI	0.00 1MF		50 V 100 V
C621	1-136-165-00		0.1MF	5%	50V	C758	1-102-116-00	(Canadian, AEP			
C622 C624	1-136-165 <i>-</i> 00 1-126-103-11	FILM ELECT	0.1MF 470MF	5% 20%	50 V 16 V	C758	1-136-813-11	CERAMI	C 680PF 680PF	10% 5%	50 V 100 V
C625	1-126-103-11	ELECT	470MF	20%	16V	C759	1-136-153-00		0.01MF	5%	507
C626 C627	1-126-103-11 1-126-163-11	ELECT ELECT	470MF 4.7MF	20% 20%	16V 50V	C760 C762	1-123 <i>-</i> 332 <i>-</i> 00 1-126 <i>-</i> 059-11	ELECT ELECT	47MF 10MF	20 % 20 %	25 V 50 V
C628	1-162-294-31	CERAMIC	0.001MF	10%	507	C763	1-107-026-00	MICA	5PF	0.5PF	500V
C629 C630	1-126-059-11 1-123-334-00	ELECT ELECT	10MF 220MF	20% 20%	50V 25V	C801	1-136-165-00		0.1MF	5%	50 V
C631		ELECT	220MF	20%	25V	C 802	1-123-356-00	(Canadian, AEP		20.4	FOV
C632 C633	1-126-059-11	ELECT CERAMIC	10MF 0.01MF	20% 30%	50V 16V	C 802	1-126-059-11	ELECT	10MF 10MF	20% 20%	50 V 50 V
C634	1-161-379-00	CERAMIC	0.01MF	30%	160	C 803	1-136-165-00 1-136-165-00		0.1MF	5%	50 V
C640	1-136-165-00	FILM	0.1MF	5%	50 V	C 804 C 805	1-126-335-11	FILM ELECT	0.1MF 220MF	5 % 20 %	50 V 10 V
C651	1-130-481-00	MYLAR	0.0068MF	5 %	500	C 806	1-123-380-00	ELECT	1MF	20%	50 V
C652 C653	1-123-306-00 1-136-165-00	ELECT FILM	47MF 0.1MF	20% 5%	10 V 50 V	C 807 C 80 8	1-124-234-00 1-136-153-00	ELECT	22MF 0.01MF	20% 5%	16 V 50 V
C70 1	1-102-820-00	(Canadian, AE								J /4	
		CERAM	IC 330PF	5 %	507	C 80 9 C 810	1-164-159-11 1-164-159-11	CERAMIC	0.1MF 0.1MF		50 V 50 V
C701	1-136-811-11	(UK)FILM	330PF	5%	1000	C901	1-161-744-00	(AEP,WG,UK)	.CERAMIC 0.0) IMF	400 V
C702 C703	1-124-915-11 1-136-153 <i>-</i> 00	ELECT FILM	10MF 0.01MF	20% 5%	63 V 50 V	C 902 C 903	1-136-153-00 1-136-153-00	(WG)FILM (WG)FILM	0.01MF 0.01MF	5% 5%	50 V 50 V
C704	1-123-381-00	ELECT	2.2MF	20%	637	C 904	1-102-978-00	(Canadian, WG)		5%	50V
C705	1-102-973-00	(Canadian,AE		5%	50V	coc	1 100 000 21			J #	J0 V
C705	1-136-808-11	(UK)FILM	100PF	5%	1000	C906	1-162-286-31	(Canadian, WG)	IIC 220PF	10%	50 V
C706	1-102-074-00	(Canadian, AE		3.5.4		C910	1-102-978-00	(Canadian,WG)		5%	50 V
C706	1-136-814-11	CERAM	O.001MF 0.001MF		50 V 100 V	C911	1-102-978-00	(Canadian,WG)		5 %	50 V
C707	1-102-074-00	(Canadian, AE	P,WG,E)	30.4	FOV	C912	1-102-978-00	(Canadian,WG)			
C707	1-136-814-11	CERAM	O.001MF 0.001MF		50V 100V	C913	1-102-978-00	CERAM (Canadian,WG)	IIC 220PF	5 %	50 V
C708	1-102-116-00	(Canadian, AE	P,WG,E)					CÉRAM	IIC 220PF	5%	507
C708	1-136-813-11	CERAM	IC 680PF 680PF	10 % 5 %	50V 100V	C954	1-102-978-00	(Canadian,WG)		5%	50V
C709	1-136-153-00	FILM	0.01MF	5 %	50 V	C 952 C 953	1-136-153-00 1-136-153-00	(WG)FILM	0.01MF	5% 5%	50 V
C7 10	1-123-332-00	ELECT	47MF	20%	25V			(WG)FILM	-	3 <i>h</i>	50 V
C712	1-126-059-11	ELECT	10MF	20%	500		*1-561-651-00 *1-561-651-00	SOCKET, CONNE SOCKET, CONNE	CTOR 7P		
C713 C715	1-107-026-00 1-136-171-00	MICA FILM	5PF 0.33MF	0.5PF 5%	500 V 50 V	CN3	1-568-118-11	SOCKET, CONNE	CTOR 16P		
C717 C718	1-102-121-00	(WG)CERAM		10 % 10 %	50V 50V		*1-562-334-00 *1-561-651-00	SOCKET, CONNE			
C751	1-102-820-00					CN6	1-568-203-11	PIN, CONNECTO		112	
			IIC 330PF	5%	50V	CN7	1-568-203-11	PIN, CONNECTO		11P	
C751	1-136-811-11	(UK)FILM	330PF	5%	100 V		*1-563-381-11 *1-566-451-11	SOCKET, CONNE HOUSING, CONN			
C752 C754	1-124-915-11 1-126-335-11	ELECT ELECT	10MF 220MF	20 % 20 %	10V	CN10 CN11	*1-563-381-11 1-568-117-11	SOCKET, CONNE	CTOR 11P CTOR 14P		

Ref.No. Part No.	Description
CNJ50 1 <u>A</u> 1-540-04 1-2	(E)OUTLET, AC (NONPOLAR) (2P)
CNJ50 1 <u>A</u> 1 -540 -062 -3	(AC OUTPUT) (Canadian)OUTLET, AC (NONPOLAR) (2P) (AC OUTPUT)
CNJ801 1-568-249-1 CNJ802*1-565-484-1	
CNP601*1-564-340-00 CNP602*1-564-340-6 CNP603*1-564-337-7	1 PIN, CONNECTOR 6P
CNP604*1-508-694-00 CNP701*1-564-337-00	
CP1 *1-560-532-00 CP2 *1-560-532-00 CP3 *1-560-532-00	PIN, CONNECTOR 7P
CP4 *1-568-202-1 CP5 1-568-120-1 CP6 1-568-120-1 CP7 *1-568-204-1	1 PIN, CONNECTOR (PC BOARD) 7P 1 PIN, CONNECTOR (PC BOARD) 7P
D201 8-719-000-2 D202 8-719-000-2 D203 8-719-303-0	6 DIODE US 1060M
D204 8-719-303-0 D205 8-719-303-0 D206 8-719-300-8	O DIODE SEL25 IOC
D207 8-719-300-8 D208 8-719-301-5 D209 8-719-301-5	2 DIODE SEL2810A
D2 10 8-719-301-5 D2 11 8-719-301-5 D2 12 8-719-303-0	2 DIODE SEL2810A
D2 13 8-719-303-0 D2 14 8-719-303-0 D2 15 8-719-000-2	O DIODE SEL2510C
D216 8-719-000-2 D301 8-719-230-0 D302 8-719-230-0	2 DIODE 30DF2
D303 8-719-230-0 D304 8-719-230-0 D305 8-719-200-7	2 DIODE 30DF2
D306 8-719-200-7 D307 8-719-200-7 D308 8-719-200-7	7 DIODE 10E2N
D309 8-719-200-7 D310 8-719-200-7 D311 8-719-200-7	7 DIODE 10E2N
D312 8-719-000-2 D313 8-719-000-2 D314 8-719-000-2	6 DIODE US1060M
D315 8-719-200-7 D316 8-719-200-7 D317 8-719-200-7	77 DIODE 10E2N
D318 8-719-200-7 D319 8-719-000-7 D362 8-719-000-7	26 DIODE US 1060M
D363 8-719-000-2 D364 8-719-000-2 D401 8-719-933-4	26 DIODE US1060M
D402 8-719-001- D403 8-719-001- D604 8-719-000-	97 DIODE UZL-16L

Ref.No. Part No	o. De	scription		
D605 8-719-0 D606 8-719-0 D607 8-719-0	000-26 DI	ODE 1SS168 ODE US1060M ODE US1060M		
D609 8-719-9 D610 8-719-0 D611 8-719-0	000 - 26 DI	ODE 1SS168 ODE US1060M ODE US1060M		
EH2 *1-564-5 EH3 *1-564-5		UG, CONNECT UG, CONNECT		
F501 <u>A</u> 1-532-5 F501 <u>A</u> 1-532-5) anadian)	FUSE, TIME-LA FUSE, GLASS T	IG 4A TUBE 8A
F502 <u>A</u> 1-532-5 F901 <u>A</u> 1-532-5)FUSE, T EP,WG,UK)	IME-LAG 4A FUSE, TIME-L	AG 4A
IC301 8-749- IC302 8-759- IC401 8-759-	111-68 IC	STK3 102-3 UPC 1237HA RC4560D		
IC601 8-759- IC602 8-759- IC603 8-759-	202 -11 IO	YM3623B TC74HC00P CXD8003S		
IC604 8-759- IC605 8-759- IC606 8-759-	203 -4 0 IC	TC5081AP TC74HC393F SN74LS624N		
IC607 8-759- IC608 8-719- IC609 8-759-	902-56 DI	TC74HC139F ODE PC817 TC74HC00P)	
IC610 8-759- IC701 8-759- IC703 8-759-	980-13 IC	M5294P SAA7320 RC5532DD		
IC.801 8-759- IC.802 8-759- IC.803 8-759-	977-72 IC	: GP1F31R ([DIGTAL OPTICAL DIGTAL OPTICAL DIGTAL OPTICAL	. 2 IN)
ÎC 804 8-759- IC 805 8-759- IC 806 8-759-	202 -9 3 IO	TC74HCU04F TC74HC153F JK)IC M5F		
	320 - 51 J/ 250-11 J/	ACK, PIN 6P ACK, PIN 2P		2 REC OUT, IN)
JR601 1-535- JR602 1-535-		AD, JUMPER AD, JUMPER		
L301 *1-420- L351 *1-420- L401 1-413-	872-00 CO	DIL, AIR COF DIL, AIR COF WG)COIL,	RE	
L451 1 -4 13-	101-00 (1	WG)COIL, WG)COIL, WG)COIL,	INPUT INPUT INPUT	
L602 1-410-	396-41 F	ERRITE BEAD ERRITE BEAD NOUCTOR	INDUCTOR INDUCTOR 4.7UH	
L605 1-410- L606 1-410-	324-11 II	NDUCTOR NDUCTOR NDUCTOR NDUCTOR	4.7UH 4.7UH 4.7UH 4.7UH	
L801 1-410-	324-11 II	NDUCTOR NDUCTOR NDUCTOR	4.7UH 4.7UH 4.7UH	

Note:
The components identified by mark 1 or dotted line with mark 1 are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque A sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description		İ	Ref.No.	Part No.	Descrip	tion		
Q20 1 Q202 Q203	8-729-117-42 8-729-194-57 8-729-173-36	TRANSISTOR 2SD774-3 TRANSISTOR 2SC945P TRANSISTOR 2SA733Q			R2 12 R2 13 R2 14	1-249-465-11 1-247-722-11 1-247-693-11	CARBON	47K 5.6K 27	5% 5% 5%	1/4W 1/4W 1/4W
Q204 Q205 Q255	8-729-173-36 8-729-107-98 8-729-107-98	TRANSISTOR 2SA733Q TRANSISTOR 2SC3622A-L TRANSISTOR 2SC3622A-L			R2 15 R2 16 R2 17	1-247-754-11 1-247-754-11 1-247-750-11		1.5K 1.5K 680		1/2W 1/2W 1/2W
Q30 1 Q302 Q303	8-729-203-45 8-729-127-53 8-729-190-53	TRANSISTOR 2SC3423 TRANSISTOR 2SC2275P TRANSISTOR 2SA985A			R2 18 R2 19 R220	1-249-462-11 1-249-465-11 1-247-749-11	CARBON	22K 47K 560	5% 5% 5%	1/4W 1/4W 1/2W
Q304 Q305 Q306	8-729-320-03 8-729-320-01 8-729-108-14	TRANSISTOR 2SC2921M-O TRANSISTOR 2SA1215M-O TRANSISTOR 2SA988F			R221 R222 R223	1-247-717-11 1-247-725-11 1-249-465-11	CARBON	2 .2K 10K 47K	5% 5% 5%	1/4W 1/4W 1/4W
Q351 Q352 Q353	8-729-203-45 8-729-127-53 8-729-190-53	TRANSISTOR 2SC3423 TRANSISTOR 2SC2275P TRANSISTOR 2SA985A			R224 R225 R226	1-247-721-11 1-247-752-11 1-247-752-11	CARBON	4.7K 1K 1K	5% 5% 5%	1/4W 1/2W 1/2W
Q354 Q355 Q356	8-729-320-03 8-729-320-01 8-729-108-14	TRANSISTOR 2SC2921M-0 TRANSISTOR 2SA1215M-0 TRANSISTOR 2SA988F			R227 R227	1-247-239-00 1-247-752-11	(Canadia	CARBON an,WG,UK,E) CARBON	1K 1K	5% 1/4W 5% 1/2W
Q401 Q402 Q403	8-729-354-52 8-729-354-52 8-729-194-57	TRANSISTOR 2SC2545 TRANSISTOR 2SC2545 TRANSISTOR 2SC945P			R228 R228	1-247-239-00 1-247-752-11	(Canadia	CARBON an,WG,UK,E) CARBON	1K 1K	5% 1/4W 5% 1/2W
Q404 Q451 Q452	8-729-173-36 8-729-354-52 8-729-354-52	TRANSISTOR 2SA733Q TRANSISTOR 2SC2545 TRANSISTOR 2SC2545			R229 R230 R231	1-247-721-11 1-247-118-00 1-247-702-11	CARBON CARBON CARBON	4.7K 300 150	5% 5% 5%	1/4W 1/4W 1/4W
Q60 1 Q602 Q603	8-72 9-900 -63 8-72 9-900 -36 8-72 9-900 -63	TRANSISTOR DTA124ES TRANSISTOR DTC124ES TRANSISTOR DTA124ES			R233 R252 R253	1-247-713-11 1-247-700-11 1-247-717-11	CARBON	1K 100 2.2K	5% 5% 5%	1/4W 1/4W 1/4W
Q604 Q606 Q607 Q654	8-729-900-63 8-729-900-63	TRANSISTOR 2SC3622AL TRANSISTOR DTA124ES TRANSISTOR DTA124ES TRANSISTOR 2SC3622AL			R254 R255 R256	1-247-722-11 1-249-753-15 1-249-753-15	CARBON CARBON CARBON	5.6K 4.7M 4.7M	5%	1/4W 1/4W 1/4W
R000 R 10 1 R 102	1-247-725-11 1-246-545-00 1-246-545-00		1/4W 1/4W 1/4W		R258 R259 R260	1-247-170-00 1-247-152-00 1-249-464-11	CARBON	43K 7.5K 39K	5% 5% 5%	1/4W 1/4W 1/4W
R 103 R 104 R 105	1-246-545-00 1-246-545-00 1-247-713-11	CARBON 1M 5% CARBON 1M 5% CARBON 1K 5%	1/4W 1/4W 1/4W		R261 R262 R263	1-249-465-11 1-249-465-11 1-247-722-11	CARBON	47K 47K 5.6K	5% 5% 5%	1/4W 1/4W 1/4W
R106 R111 R112	1-249-417-11 1-249-417-11 1-249-417-11	CARBON 1K 5% (Canadian, WG)CARBON (Canadian, WG)CARBON	1/4W 1K 5% 1K 5%	1/4W 1/4W	R279 R283 R301	1-247-721-11 1-247-713-11 1-247-713-11		4.7K 1K 1K	5% 5% 5%	1/4W 1/4W 1/4W
R113 R114 R151	1-249-417-11 1-249-417-11 1-246-545-00	(Canadian,WG)CARBON (Canadian,WG)CARBON CARBON 1M 5%		1/4W 1/4W	R302 R303 R304	1-249-599-11 1-249-668-11 1-247-713-11	CARBON CARBON CARBON	91K 620 1K	5% 5% 5%	1/4W 1/2W 1/4W
R152 R153 R154	1-246-545-00 1-246-545-00 1-246-545-00	CARBON 1M 5% CARBON 1M 5% CARBON 1M 5%	1/4W 1/4W 1/4W		R305 R306 R307	1-247-707-11 <u>1-212-990-00</u> <u>1-212-950-00</u>	CARBON FUSIBLE FUSIBLE	390 220 4.7	5% 5% 5%	1/4W 1/2W F 1/2W F
R 155 R 156 R 16 1	1-247-713-11 1-249-417-11 1-249-417-11	CARBON 1K 5% CARBON 1K 5% (Canadian, WG)CARBON	1/4W 1/4W 1K 5%	1/4W	R30 8 R30 9 R3 10	<u>1-212-950-00</u> 1-217-611-00 1-217-611-00	FUSIBLE METAL PL METAL PL		5% 10% 10%	1/2W F 2W 2W
R 162 R 163 R 164	1-249-417-11 1-249-417-11 1-249-417-11	(Canadian,WG)CARBON (Canadian,WG)CARBON (Canadian,WG)CARBON	1K 5%	1/4W 1/4W 1/4W	R3 11 R3 12 R3 13	▲1-247-717-11 1-249-460-11 ▲1-212-962-00	CARBON CARBON FUSIBLE	2.2K 15K 15	5% 5% 5%	1/4W F 1/4W 1/2W F
R202 R203 R204	1-247-700-11 1-247-717-11 1-247-722-11	CARBON 100 5% CARBON 2.2K 5% CARBON 5.6K 5%	1/4W 1/4W 1/4W		R3 14 R3 15 R3 16 R3 17	▲1-212-962-00 1-247-891-00 1-247-725-11 1-247-887-00	FUSIBLE CARBON CARBON CARBON	15 330K 10K 220K	5% 5% 5% 5%	1/2W F 1/4W 1/4W 1/4W
R205 R206 R208	1-249-753-15 1-249-753-15 1-247-170-00	CARBON 4.7M 5% CARBON 4.7M 5% CARBON 43K 5%	1/4W 1/4W 1/4W		г					
R209 R2 10 R2 11	1-247-152-00 1-249-464-11 1-249-465-11	CARBON 7.5K 5% CARBON 39K 5% CARBON 47K 5%	1/4W 1/4W 1/4W	-29		Note: The components fied by mark A ted line with m are critical for sa Replace only wi number specified	or dot- ark 🚹 fety, th part	Note: Les compos une marque pour la sécu Ne les remp pièce portan fié.	(M)so ité. lacer (nt critiques que par une

Ref.No. Part No.	Description	Ref.No.	Part No.	Description)	
R318 1-247-881-00 R319 1-249-461-11 R320 1-247-721-11	CARBON 120K 5% 1/4W CARBON 18K 5% 1/4W CARBON 4.7K 5% 1/4W	R461 R462 R463	1-247-725-11 1-249-484-11 1-247-739-11	CARBON CARBON CARBON	10K 5% 6.8 5% 100 5%	1/4W 1/2W 1/2W
R321 1-249-462-11 R323 <u>A</u> 1-212-849-00 R324 1-247-727-11	CARBON 22K 5% 1/4W F (WG,UK,E,AEP)	R465 R466 R467	1-247-700-11 1-214-937-00 1-249-844-11	CARBON CARBON CARBON	100 5% 1M 5% 56K 5%	1/4W 1/2W 1/2W
R325 1-247-747-11 R326 1-249-721-11	CARBON 10 5% 1/2W CARBON 470 5% 1/2W CARBON 100K 5% 1/2W	R468 R469 R481	1-249-818-11 1-247-713-11 1-247-713-11	CARBON CARBON (WG)CAR	4.7K 1% 1K 5% BON 1K 5	1/2W 1/4W % 1/4W
R327 1-247-708-11 R351 1-247-713-11	(WG,UK,E,AEP) CARBON 470 5% 1/4W CARBON 1K 5% 1/4W	R4 82 R60 1 R6 13	1-247-713-11 1-249-405-11 1-249-422-11	(WG)CAR CARBON CARBON	BON 1K 5 100 5% 2.7K 5%	% 1/4W 1/4W 1/4W
R352 1-249-599-11 R353 1-249-668-11 R354 1-247-713-11	CARBON 91K 5% 1/4W CARBON 62O 5% 1/2W CARBON 1K 5% 1/4W	R6 14 R6 15 R6 16	1-247-903-00 1-249-417-11 1-249-422-11	CARBON CARBON CARBON	1M 5% 1K 5% 2.7K 5%	1/4W 1/4W 1/4W
R355 1-247-707-11 R356 &1-212-990-00 R357 &1-212-950-00	CARBON 390 5% 1/4W FUSIBLE 220 5% 1/2W F FUSIBLE 4.7 5% 1/2W F	R617 R618 R619	1-249-422-11 1-249-422-11 1-249-422-11	CARBON CARBON CARBON	2.7K 5% 2.7K 5% 2.7K 5%	1/4W 1/4W 1/4W
R35 8	FUSIBLE 4.7 5% 1/2W F METAL PLATE 0.1 10% 2W METAL PLATE 0.1 10% 2W	R620 R62 1 R622	1-249-422-11 1-249-422-11 1-249-421-11	CARBON CARBON CARBON	2.7K 5% 2.7K 5% 2.2K 5%	1/4W 1/4W 1/4W
R361 &1-247-717-11 R362 1-249-460-11 R363 &1-212-962-00	CARBON 2.2K 5% 1/4W F CARBON 15K 5% 1/4W FUSIBLE 15 5% 1/2W F	R623 R624 R625	1-249-422-11 1-249-422-11 1-259-464-11	CARBON CARBON CARBON	2.7K 5% 2.7K 5% 33K 5%	1/4W 1/4W 1/6W
R364	FUSIBLE 15 5% 1/2W F CARBON 330K 5% 1/4W (AEP,WG,UK,E)CARBON 10 5% 1/2W	R626 R627 R628	1-259-476-11 1-249-427-11 1-249-434-11	CARBON CARBON CARBON	100K 5% 6.8K 5% 27K 5%	1/6W 1/4W 1/4W
R375 1-247-747-11 R376 1-249-721-11 R377 1-247-708-11	CARBON 470 5% 1/2W CARBON 100K 5% 1/2W CARBON 470 5% 1/4W	R630 R631 R632	1-249-421-11 1-249-411-11 1-259-426-11	CARBON CARBON CARBON	2.2K 5% 330 5% 820 5%	1/4W 1/4W 1/6W
R401	METAL OXIDE 2.7K 5% 2W F METAL OXIDE 3.3K 5% 2W F CARBON 4.7K 5% 1/4W	R633 R634 R635	1-259-428-11 1-249-417-11 1-259-468-11	CARBON CARBON CARBON	1K 5% 1K 5% 47K 5%	1/6W 1/4W 1/6W
R404 1-247-721-11 R405 1-247-706-11	CARBON 4.7K 5% 1/4W (Canadian, AEP, E, UK)CARBON 330 5% 1/4W CARBON 100K 5% 1/4W	R636 R638 R639	1-249-433-11 1-249-441-11 1-249-393-11	CARBON CARBON CARBON	22K 5% 100K 5% 10 5%	1/4W 1/4W 1/4W
R406 1-249-469-11 R407 1-247-700-11 R408 1-249-469-11 R409 1-247-713-11	CARBON 100 5% 1/4W CARBON 100K 5% 1/4W	R642 R644 R651	1-249-441-11 1-259-453-11 1-249-405-11	CARBON CARBON CARBON	100K 5% 11K 5% 100 5%	1/4W 1/6W 1/4W
R410 1-247-713-11 R411 1-247-725-11 R412 1-249-484-11	CARBON 1K 5% 1/4W CARBON 10K 5% 1/4W CARBON 6.8 5% 1/2W	R652 R653 R654	1-249-407-11 1-247-903-00 1-249-433-11	CARBON	150 5% 1M 5% 22K 5%	1/4W 1/4W 1/4W
R4 13 1-247-739-11 R4 14 1-247-138-00 R4 15 1-247-700-11	CARBON 100 5% 1/2W CARBON 2K 5% 1/4W	R655 R656 R657	1-249-429-11 1-249-437-11 1-249-429-11	CARBON CARBON CARBON	10K 5% 47K 5% 10K 5%	1/4W 1/4W 1/4W
R416 1-214-937-00 R417 1-249-844-11 R418 1-249-818-11	CARBON 1M 5% 1/2W CARBON 56K 5% 1/2W	R65 8 R65 9 R660	1-249-429-11 1-249-429-11 1-249-437-11	CARBON	10K 5% 10K 5% 47K 5%	1/4W 1/4W 1/4W
R419 1-247-713-11 R431 1-247-713-11 R432 1-247-713-11	CARBON 1K 5% 1/4W (WG)CARBON 1K 5% 1/4W (WG)CARBON 1K 5% 1/4W	R661 R662 R663	1-249-433-11 1-249-433-11 1-249-422-11	CARBON	22K 5% 22K 5% 2.7K 5%	1/4W 1/4W 1/4W
R455 1-247-706-11	CARBON 330 5% 1/4W	R664 R701 R702	1-249-396-11 1-259-446-11 1-259-449-11	CARBON CARBON CARBON	18 5% 5.6K 5% 7.5K 5%	1/4W 1/6W 1/6W
R456 1-249-469-11 R457 1-247-700-11 R458 1-249-469-11	CARBON 100 5% 1/4W CARBON 100K 5% 1/4W	R703 R704 R705	1-259-446-11 1-259-461-11 1-259-460-11		5.6K 5% 24K 5% 22K 5%	1/6W 1/6W 1/6W
R459 1-247-713-11 R460 1-247-713-11	CARBON 1K 5% 1/4W		Note: The component	No sidenti- Le		identifiés o

The components identified by mark A or dotted line with mark A are critical for safety. Replace only with part number specified.

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Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No.	Part No.	Description			1
R706	1-259-500-11	CARBON	1M	5%	1/6W
R707	1-259-444-11	CARBON	4.7K	5%	1/6W
R708	1-259-476-11	CARBON	100K	5%	1/6W
R709	1-259-440-11	CARBON	3.3K	5%	1/6W
R710	1-259-440-11	CARBON	3.3K	5%	1/6W
R711	1-259-468-11	CARBON	47K	5%	1/6W
R713	1-259-448-11	CARBON	6.8K	5%	1/6W
R714	1-259-460-11	CARBON	22K	5%	1/6W
R715	1-259-392-11	CARBON	33	5%	1/6W
R716	1-259-468-11	CARBON	47K	5%	1/6W
R751	1-259-446-11	CARBON	5.6K	5%	1/6W
R752	1-259-449-11	CARBON	7.5K	5%	1/6W
R753	1-259-446-11	CARBON	5.6K	5%	1/6W
R754	1-259-461-11	CARBON	24K	5%	1/6W
R755	1-259-460-11	CARBON	22K	5%	1/6W
R756	1-259-500-11	CARBON	1M	5%	1/6W
R757	1-259-444-11	CARBON	4.7K	5%	1/6W
R758	1-259-476-11	CARBON	100K	5%	1/6W
R759	1-259-440-11	CARBON	3.3K	5%	1/6W
R760	1-259-440-11	CARBON	3.3K	5%	1/6W
R761	1-259-468-11	CARBON	47K	5%	1/6W
R763	1-259-448-11	CARBON	6.8K	5%	1/6W
R764	1-259-460-11	CARBON	22K	5%	1/6W
R765	1-259-392-11	CARBON	33	5%	1/6W
R766	1-259-468-11	CARBON	47K	5%	1/6W
R801	1-249-415-11	CARBON	680	5%	1/4W
R802	1-247-804-11	CARBON	75	5%	1/4W
R 803	1-249-417-11	CARBON	1K	5%	1/4W
R 804	1-249-415-11	CARBON	680	5%	1/4W
R 805	1-249-415-11	CARBON	680	5%	1/4W
R 80 6	1-249-417-11	CARBON	1K	5%	1/4W
R 80 7	1-249-417-11	CARBON	1K	5%	1/4W
R 80 8	1-247-903-00	CARBON	1M	5%	1/4W
R 80 9	1-249-417-11	CARBON		5%	1/4W
R 90 2	1-247-727-11	(WG)CARBON		5%	1/2W
R 90 3	1-247-727-11	(WG)CARBON		5%	1/2W
R952 R953	1-247-727-11 1-247-727-11	(WG)CARBO			1/2W 1/2W
RT301 RT351	1-237-455-11 1-237-455-11	RES, ADJ, CARI	BON 50	0	
RV 10 1 RV 102 RV 103 RV 104	1-238-448-11 1-238-446-11 1-238-447-11 1-237-472-11	RES, VAR, CARI RES, VAR, CARI RES, VAR, CARI RES, VAR, CARI	BON 251 BON 251	OK /250K < /500K	(TREBLE) (BASS)
RY301	1-515-501-00	RELAY			
S201 S202	1-571-824-11 1-571-821-11	SWITCH, ROTAR' SWITCH, ROTAR'	Y SLID	Ε	1
S203	1-571-823-11	SWITCH, ROTAR			CTOR-DIGITAL) OUT SELECTOR)
S204 S205 S206	1-571-&8-11 1-571-&7-11 1-571-&2-11	SWITCH, PUSH SWITCH, PUSH SWITCH, ROTAR	(1 KEY	NITUM)(IG)
	1-571-&5-11 1-571-111-11 1-554-920-31 1-570-307-11	SWITCH, ROTAR' SWITCH, PUSH SWITCH, PUSH (E)SWITCH,	(1 KEY (AC PO VOLTA)(CARTF WER)(1 GE CHAN	KEY)(POWER)

Ref.No. Part No.	<u>Description</u>
T1	(Canadian)TRANSFORMER, POWER (AEP)TRANSFORMER, POWER (WG)TRANSFORMER, POWER (E)TRANSFORMER, POWER (UK)TRANSFORMER, POWER
TM501 1-537-235-11 TM501 1-537-235-11 TM501 1-537-227-11 TM501 1-537-228-11	(UK)TERMINAL BOARD(SP) (E)TERMINAL BOARD(SP)(SPEAKER A,B) (AEP)TERMINAL BOARD(SP)(SPEAKER A,B) (WG,Canadian)TERMINAL BOARD(SP)(SPEAKER A,B)
VH1 *1-564-104-00 VH2 *1-564-321-00 VH3 1-564-320-00	PIN, CONNECTOR 3P PIN, CONNECTOR 2P PIN, CONNECTOR 2P
VH4 *1-564-321-00 VH5 *1-565-792-11 VH6 *1-564-321-00 VH8 *1-564-241-00	(AEP,WG,UK)PIN, CONNECTOR 2P PIN, CONNECTOR 2P (AEP,WG,UK)PIN, CONNECTOR 2P PIN, CONNECTOR 4P
VH9 *1-560-595-21 VH9 *1-564-321-00	(E)terminal (With BASE) (UK,Canadian)PIN, CONNECTOR 2P
VH11 *1-564-321-00 VH12 1-564-320-00 VH20 1-535-141-00	(E)PIN, CONNECTOR 2P PIN, CONNECTOR 2P (E)BASE POST 22MM (10MM PITCH) 4P
X601 1-577-269-11	VIBRATOR, CRYSTAL (18.43MHz)
ACCESSORY & PAC	KING MATERIAL
3-786-976-11 (Canadian, UK, E)MANUAL, INSTRUCTION
	AEP,WG)MANUAL, INSTRUCTION
	USHION
*4-929-221-01 (*4-929-221-11 (E)INDIVIDUAL CARTON Canadian,AEP,WG,UK)INDIVIDUAL CARTON

Note:
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Replace only with part number specified.

Note:

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Ne les remplacer que par une pièce portant le numérospécifié.

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